

~~Computing a value of  $\log(x)$  for a binary floating point representation of a particular number  $x$  stored in a memory of a computing device utilizing the first degree polynomial in  $m$ .~~

4. (once amended) A method in accordance with Claim 2 wherein computing an approximation to  $\log(x)$  comprises the step of computing an approximation written as:

*#5*  
$$y = -\log(x) \approx b_i + c_i \Delta x + e_i x \log(2)$$
  
for  $i = 0, \dots, N-1$

where:

$$b_i = -\log(a) + \left( \frac{1}{4a_i N} \right)^2 - \left( 1 + \frac{1}{2N} \right) \frac{1}{a_i}; \text{ and}$$

$$c_i = -1/a_i.$$

12. (once amended) A method in accordance with Claim 10 wherein computing an approximation to  $\log(x)$  comprises the step of computing an approximation written as:

*#6*  
$$y = -\log(x) \approx b_i + c_i \Delta x + e_i x \log(2)$$
  
for  $i = 0, \dots, N-1$

where:

$$b_i = -\log(a) + \left( \frac{1}{4a_i N} \right)^2 - \left( 1 + \frac{1}{2N} \right) \frac{1}{a_i}; \text{ and}$$

$$c_i = -1/a_i.$$

18. (once amended) A computing device in accordance with Claim 16 wherein said device being configured to compute an approximation to  $\log(x)$  comprises said device being configured to compute an approximation written as:

$$y = -\log(x) \approx b_i + c_i \Delta x + ex \log(2)$$

*Cont  
pt*

for  $i = 0, \dots, N-1$

where:

$$b_i = -\log(a) + \left( \frac{1}{4a_i N} \right)^2 - \left( 1 + \frac{1}{2N} \right) \frac{1}{a_i}; \text{ and}$$

$$c_i = -1/a_i.$$

26. (once amended) A computing device in accordance with Claim 24 wherein said device being configured to compute an approximation to  $\log(x)$  comprises said device being configured to compute an approximation written as:

$$y = -\log(x) \approx b_i + c_i \Delta x + ex \log(2)$$

for  $i = 0, \dots, N-1$

where:

$$b_i = -\log(a) + \left( \frac{1}{4a_i N} \right)^2 - \left( 1 + \frac{1}{2N} \right) \frac{1}{a_i}; \text{ and}$$

$$c_i = -1/a_i.$$

PLEASE ADD THE FOLLOWING NEW CLAIMS:

*37*  
29. A ~~method~~ in accordance with Claim 1 further comprising using the approximation to process at least one image of an object of interest.

*30*  
30. A computing device in accordance with Claim 15, said computing device further configured to use the value of  $\log(x)$  to process at least one image of an object of interest.